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Bibliography

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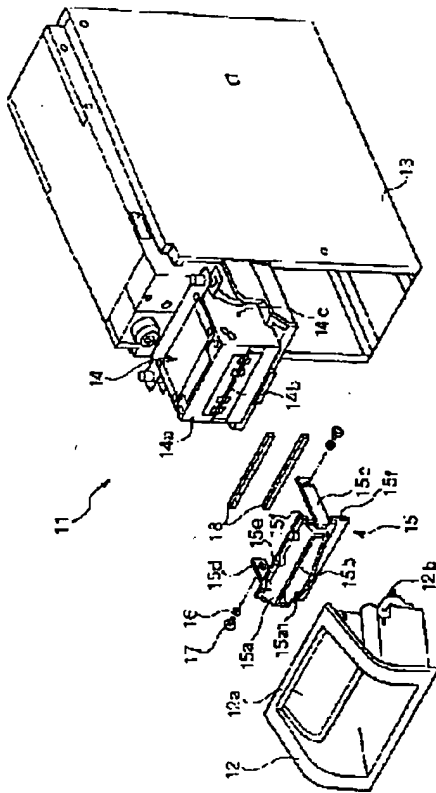
Summary

(57) [Abstract]

[Objects of the Invention] The bill handling equipment simply set to a game machine is offered without requiring adjustment.

[Elements of the Invention] Arm 15c is prepared in the both-sides section of the interior material 15 of a bill proposal, and 15d of loose insertion mouths is formed in each edge of these arm 15c. A spacer 16 is loosely inserted in 15d of each loose insertion mouth, and a screw 17 is further inserted in each spacer 16. Moreover, sponge 18 is stuck on 15f of vertical end faces of bill guidance mouth 15b by the side of the building barricade data 14 of the interior material 15 of a bill proposal. By screwing in screw hole 14c by which each screw 17 was formed in the side of the building barricade data 14, the interior material 15 of a bill proposal has a certain amount of play in the direction A perpendicular to front 14a of the building barricade data 14, and the parallel directions B and C, and is attached in them.

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CLAIMS

[Claim(s)]

[Claim 1] It is bill handling equipment of the game machine which is equipped with the buffer member characterized by providing the following, and is characterized by attaching the aforementioned interior material of a bill proposal in the direction perpendicular to a front face and the parallel direction of the aforementioned bill discernment machine with play. The bill discernment machine which discriminates the effectiveness of the injection bill incorporated from the bill intake formed in the

front face Interior material of a bill proposal attached in the front face of the aforementioned bill discernment machine in which the bill guidance mouth which shows an injection bill to the aforementioned bill intake was formed The bill input port member which is made to expose the aforementioned bill guidance mouth to the front face of a game machine, and is allotted to the airframe front face of a wrap game machine in the aforementioned interior material of a bill proposal is set to the bill handling equipment of the game machine constituted by having, and it is elasticity between the front face of the aforementioned bill discernment machine, and the aforementioned interior material of a bill proposal.

[Claim 2] Bill handling equipment of the game machine according to claim 1 characterized by providing the following. The aforementioned interior material of a bill proposal is the 1st engagement section parallel to the front face of the aforementioned bill discernment machine which rises and falls in ** on the other hand. It is the 1st positioning section which is equipped with the 2nd engagement section which rises and falls in this direction that intersects perpendicularly with ** on the other hand, and the aforementioned bill input port member engages with the engagement section of the above 1st, and carries out order of the idle movement position of the aforementioned interior material of a bill proposal in the one aforementioned direction. The 2nd positioning section which engages with the engagement section of the above 2nd and carries out order of the idle movement position of the aforementioned interior material of a bill proposal in the direction which intersects perpendicularly in the one aforementioned direction

[Claim 3] The aforementioned game machine is bill handling equipment of the game machine according to claim 1 or 2 characterized by being a slot machine.

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Industrial Application] this invention relates to the bill handling equipment used for game machines, such as a slot machine and a pachinko machine.

[0002]

[Description of the Prior Art] Conventionally, there are some which are used for the slot machine 1 which shows appearance in the perspective diagram of drawing 5 as this kind of bill handling equipment, for example. The control panel 2 with which the BET button, the coin expenditure button, etc. were prepared in the transverse-plane center section of the slot machine 1 is constituted. the bill input port which bill handling equipment 3 is formed in the right end section of this control panel 2, and constitutes this bill handling equipment 3 in this drawing — the member 4 is shown The main part of bill handling equipment 3 is contained inside this slot machine 1, and appears by opening the main door 5.

[0003] Drawing 6 is the perspective diagram showing the internal structure of the slot machine 1 which opens this main door 5 and is observed. The main part of bill handling equipment 3 is attached in the building stand 6, is equipped with the bill discernment machine 7, a stacker (bill stowage) 8, and the interior material 9 of a bill proposal, and is constituted. The bill discernment machine 7 judges the truth and the quality of an injection bill. The injection bill judged that is effective with this bill discernment machine 7 is temporarily kept until it is contained by the stacker 8 and collected. It is fixed to the bill intake of this bill discernment machine 7 in one, and the interior material 9 of a bill proposal shows the bill thrown into the bill guidance mouth to the bill discernment machine 7. the state where this bill guidance mouth is projected and formed in the front face of the interior material 9 of a bill proposal, and the main door 5 was closed — bill input port — it exposes to opening 4a of a member 4

[0004]

[Problem(s) to be Solved by the Invention] however, the bill handling equipment 3 which carried out the above-mentioned conventional composition — setting — bill input port — the member 4 is attached in the main door 5 side, and this soma article of bill handling equipment 3 is built in the main part side of a slot machine 1 therefore, bill input port — the time of the main door 5 being closed, as for the relative position of a member 4 and the interior material 9 of a bill proposal — the bill guidance mouth of the interior material 9 of a bill proposal — bill input port — it needs to be set as the position inserted in opening 4a of a member 4 for this reason, the former — the bill handling equipment 3 of composition — setting — the attachment size to the main part of a slot machine of the main door 5, and bill input port — close dimensional accuracy requires of the attachment size to the main door 5 of a member 4, and the attachment size to the main part of a slot machine of the main part of bill handling equipment — having — further — the main door 5 and bill input port — the variation in each part article sizes, such as a member 4 and the interior material 9 of a bill proposal the time of closing the main door 5, after it could not maintain these attachment dimensional accuracy to the slot machine 1 of bill

handling equipment 3 or the size error of each component part varied greatly -- bill input port -- a member 4 -- the interior material 9 of a bill proposal -- colliding -- each part article -- blemish arrival -- it will ***** and damage for this reason -- such a case -- the main door 5 -- raising -- bill input port -- the work which doubles the insertion position of a member 4 with the interior material 9 of a bill proposal needed to be carried out, and the bill handling equipment 3 of composition was not able to be simply set to the game machine conventionally [above-mentioned]

[0005] in order to avoid that such a problem arises on the other hand -- bill input port -- it is possible to form opening 4a of a member 4 greatly However, if opening 4a is formed greatly, a crevice will be produced on the device front face of a slot machine 1, and a possibility which was in the device that it may be shifted arises. Moreover, in order to solve the above-mentioned problem, preparing all the component parts of bill handling equipment 3 in the main door 5 side is also considered. However, if bill handling equipment 3 is installed in the main door 5, the weight of the main door 5 will increase and it will be hard coming to carry out switching operation of the main door 5. The range which can attach bill handling equipment 3 in the main door 5 will also be limited, and it will become impossible moreover, to install bill handling equipment 3 in a desired position. Furthermore, if bill handling equipment 3 is installed in the main door 5, neither a discrimination circuit 7 nor stacker 8 grade will appear only by opening a door. Therefore, it is hard coming to carry out the desorption of these to a slot machine 1, and, as a result, the maintenance nature of bill handling equipment 3 falls.

[0006]

[Means for Solving the Problem] The bill discernment machine which discriminates the effectiveness of the injection bill incorporated from the bill intake which was made in order that this invention might solve such a technical problem, and was formed in the front face, The interior material of a bill proposal attached in the front face of a bill discernment machine in which the bill guidance mouth which shows an injection bill to this bill intake was formed, In the bill handling equipment of the game machine constituted by having the bill input port member which is made to expose this bill guidance mouth to the front face of a game machine, and is allotted to the airframe front face of a wrap and a game machine in the interior material of a bill proposal Between the front face of the above-mentioned bill discernment machine, and the above-mentioned interior material of a bill proposal, it had the buffer member which has elasticity, and it had play in the direction perpendicular to a front face and the parallel direction of a bill discernment machine, and the above-mentioned interior material of a bill proposal was attached.

[0007] Moreover, the 1st engagement section parallel to the front face of a bill discernment machine to the above-mentioned interior material of a bill proposal which rises and falls in ** on the other hand, The 1st positioning section which is equipped with the 2nd engagement section which rises and falls in this direction that

intersects perpendicularly with ** on the other hand, engages with the above-mentioned bill input port member at the 1st engagement section, and carries out order of the idle movement position of the interior material of a bill proposal in the one above-mentioned direction, It engaged with the 2nd engagement section and had the 2nd positioning section which carries out order of the idle movement position of the interior material of a bill proposal in the direction which intersects perpendicularly in the one above-mentioned direction.

[0008]

[Function] The size error in a direction perpendicular to the front face of a bill discernment machine produced relatively between the bill input port member allotted to the airframe front face of a game machine and the bill discernment machine built in a game machine is absorbed, when the interior material of a bill proposal moves idly in this perpendicular direction and a buffer member expands and contracts to this perpendicular direction. Moreover, it sets in parallel and, as for the size error in a direction parallel to the front face of a bill discernment machine, the interior material of a bill proposal is absorbed by [this] moving idly.

[0009] In case the bill input port member by the side of an airframe front face is inserted in the interior material of a bill proposal by the side of the main part of an airframe, moreover, each the 1st and 2nd positioning sections prepared in the bill input port member It engages with the 1st and 2nd engagement sections prepared in the interior material of a bill proposal, order of the idle movement position of the interior material of a bill proposal is carried out, and the relative position between a bill input port member and the interior material of a bill proposal is held in a proper position.

[0010]

[Example] Next, one example which applied the bill handling equipment of the game machine by this invention to the bill handling equipment of a slot machine is explained.

[0011] Drawing 1 is the perspective diagram showing each component part of the bill handling equipment by this example. the bill input port which attaches bill handling equipment in the main part of a slot machine at the main part 11 of bill handling equipment by which built-in fixation is carried out, and a main door, and is fixed -- it consists of members 12

[0012] The main part 11 of bill handling equipment is equipped with the bill discernment machine (building barricade data) 14 constituted by the upper part of the stacker receipt case 13, and the interior material 15 of a bill proposal with which front 14a of this building barricade data 14 is equipped. Bill intake 14b is formed in front 14a, and the building barricade data 14 discriminate the effectiveness of the injection bill incorporated from this bill intake 14b. An injection bill once passes this building barricade data 14 regardless of the truth, an effective bill is incorporated as it is, and the bill which is not effective is returned. Bill guidance mouth 15b made to counter by bill intake 14b is formed in anterior part lobe 15a of the interior material

15 of a bill proposal. the time of a main door being closed, as for lobe 15a — bill input port — it inserts in opening 12a of a member 12, and appears in the device exterior, and bill guidance mouth 15b is exposed to the device front face of a slot machine. The shift of the cross direction is stopped by this bill guidance mouth 15b, and an injection bill is guided at bill intake 14b of the building barricade data 14.

[0013] Moreover, arm 15c is prepared in the both-sides section of the interior material 15 of a bill proposal, and 15d of loose insertion mouths is formed in each edge of these arm 15c. As shown in the side elevation of drawing 3 (a), the perfect circle is carrying out opening of the 15d of this loose insertion mouth in the perpendicular and the configuration extended for a while horizontally. A spacer 16 is loosely inserted in 15d of each loose insertion mouth, and a screw 17 is further inserted in each spacer 16. Moreover, along with 15f of vertical end faces of oblong opening of this bill guidance mouth 15b, each sponge 18 is stuck on bill guidance mouth 15b by the side of the building barricade data 14 of the interior material 15 of a bill proposal. Each sponge 18 constitutes the buffer member which has elasticity, and demonstrates damper ability. The interior material 15 of a bill proposal is attached in front 14a of the building barricade data 14 by screwing in screw hole 14c by which each screw 17 was formed in the side of the building barricade data 14. Under the present circumstances, each sponge 18 is inserted between the interior material 15 of a bill proposal, and front 14a of the building barricade data 14. Moreover, the interval between each arm 15c is set up with play somewhat more widely than the width of face of the building barricade data 14, and each arm 15c slides on the peripheral face of a spacer 16 to some extent in this cross direction.

[0014] Drawing 2 is the perspective diagram showing the state where the interior material 15 of a bill proposal was attached to the building barricade data 14. A spacer 16 is loosely inserted in 15d of loose insertion mouths as mentioned above, and the interior material 15 of a bill proposal is attached in the building barricade data 14. For this reason, the interior material 15 of a bill proposal moves idly to some extent to the cross direction A, the vertical direction B of parallel illustration, and longitudinal direction C of illustration perpendicular to front 14a of the building barricade data 14. Although the injection bill 19 is inserted in bill intake 15b from the direction of illustration, the above-mentioned idle movement of the interior material 15 of a bill proposal is set as the play of the grade from which the bill conveyance path formed in from bill guidance mouth 15b before bill intake 14b is always secured.

[0015] Drawing 3 (a) indicates each side of the bill injection regio-oralis material 12 to be the above-mentioned interior material 15 of a bill proposal, and this drawing (b) shows the base of these each part article.

[0016] Flange section 12b and flange section 12c are formed in the interior material 15 side of a bill proposal of the bill injection regio-oralis material 12. These flanges sections 12b and 12c set a fixed interval, separate, and are formed, and the space which lobe 15a of the interior material 15 of a bill proposal inserts is formed between these flanges section 12b and 12c. 12d of three hollows shown in this drawing (b)

forms in this flange section 12b — having — **** — 12d of each hollow — bill input port — the 1st positioning section of a member 12 is constituted moreover, bill input port — flange section 12c in which the edge which a member 12 sets caudad and projects to the interior material 15 side of a bill proposal was formed — bill input port — the 2nd positioning section of a member 12 is constituted [0017] Moreover, 12d of each hollow of the bill injection regio-oralis material 12 and three boss 15e which fits in are formed in the top root section of lobe 15a of the interior material 15 of a bill proposal (refer to drawing 1). When these boss 15e constitutes the 1st engagement section of the interior material 15 of a bill proposal and the building barricade data 14 are equipped with the interior material 15 of a bill proposal, each boss 15e rises and falls in the longitudinal direction C parallel to front 14a of the building barricade data 14. moreover, the lower part 15a1 of lobe 15a of the interior material 15 of a bill proposal — bill input port — it has projected to the member 12 side and the 2nd engagement section of the interior material 15 of a bill proposal is constituted The lower part 15a1 of this lobe 15a rises and falls in the vertical direction B which intersects perpendicularly with the longitudinal direction C parallel to front 14a of the building barricade data 14.

[0018] the bill input port attached in the main door by closing the main door of a slot machine — a member 12 approaches the interior material 15 of a bill proposal built [of this drawing (a)] in the main part of a slot machine from **** And as for the bill injection regio-oralis material 12, the flange section 12b contacts the top inclined plane of anterior part lobe 15a of the interior material 15 of a bill proposal first. By closing a main door further, flange section 12b slides on this inclined plane, and 12d of each hollow fits into each boss 15e of the interior material 15 of a bill proposal. this, simultaneously flange section 12c — the lobe lower part 15a1 — caudad — sliding in . consequently, bill input port — it joins in the state where it stuck as a member 12 and the interior material 15 of a bill proposal were shown in the side elevation of drawing 4 (a), and the interior material 15 of a bill proposal exposes bill guidance mouth 15b to the front face of a main door — making — bill input port — it is covered by the member 12

[0019] This drawing (b) is a plan which looked at this junction state from the upper part, and this drawing (c) is a bottom plan view which looked at this junction state from the lower part. As shown in this drawing (b), when 12d of hollows of the bill injection regio-oralis material 12 engages with boss 15e of the interior material 15 of a bill proposal, in the longitudinal direction C parallel to the front face of the building barricade data 14, order of the installation position of the interior material 15 of a bill proposal moving idly is carried out. Moreover, as shown in this drawing (c), when flange section 12c of the bill injection regio-oralis material 12 engages with the lobe lower part 15a1 of the interior material 15 of a bill proposal, in the vertical direction B parallel to the front face of the building barricade data 14, order of the installation position of the interior material 15 of a bill proposal moving idly is carried out. It becomes depressed. namely, bill input port — the time of inserting opening 12a of a

member 12 in lobe 15a of the interior material 15 of a bill proposal — bill input port — it was prepared in the member 12 — 12d and flange section 12c boss 15e and the lobe lower part 15a1 which were prepared in the interior material 15 of a bill proposal — being engaged — the idle movement position of the interior material 15 of a bill proposal — order — carrying out — bill input port — the relative position between a member 12 and the interior material 15 of a bill proposal is held in a proper position

[0020] the bill input port which is attached in the main door front face of a slot machine according to the bill handling equipment by such this example — the size error resulting from the attachment dimensional accuracy and part dimensional accuracy which are produced relatively between a member 12 and the building barricade data 14 built in the main part of a slot machine is absorbed when the interior material 15 of a bill proposal moves idly That is, this size error produced in the direction A perpendicular to front-face of building barricade data 14a is absorbed, when the interior material 15 of a bill proposal moves idly in this perpendicular direction A and sponge 18 expands and contracts to this perpendicular direction A. Moreover, the above-mentioned size error produced in the directions B and C parallel to front-face of building barricade data 14a is absorbed when the interior material 15 of a bill proposal moves idly as mentioned above in these parallel directions B and C.

[0021] In addition, although the case where sponge 18 was used as a buffer member in the above-mentioned example was explained, a buffer member should just be a member which demonstrates the damper ability which is not limited to this and has elasticity, such as a spring and rubber. When such a buffer member is used, the same effect as the above-mentioned example is done so. Moreover, although the case where this invention was applied to a slot machine in the above-mentioned example was explained, it is also possible for this invention not to be limited to this and to apply this invention to other game machines called a pachinko machine.

[0022]

[Effect of the Invention] The size error in a direction perpendicular to the front face of a bill discernment machine which is produced relatively between the bill input port member allotted to the airframe front face of a game machine and the bill discernment machine built in a game machine according to this invention as explained above is absorbed, when the interior material of a bill proposal moves idly in this perpendicular direction and a buffer member expands and contracts to this perpendicular direction. Moreover, it sets in parallel and, as for the size error in a direction parallel to the front face of a bill discernment machine, the interior material of a bill proposal is absorbed by [this] moving idly.

[0023] For this reason, it is not necessary to perform installation to the device of each part article with close dimensional accuracy like before, and to suppress the variation in each part article size severely like before. Therefore, bill handling equipment is simply set to a game machine, without requiring adjustment, and does

not carry out blemish arrival beam ***** of each part article like before according to a size error. Moreover, since it is not necessary to form big opening in a bill input port member, a crevice which was present in the device front face and which is shifted is not produced. Moreover, the weight of a door does not increase, and a door is opened [since a bill input port member is attached in a device front-face side and the main part of bill handling equipment is contained inside the main part of a device] and closed easily. And restrictions are not produced like before in the installation position to the game machine of bill handling equipment. Furthermore, by only opening a door, a bill discernment machine, a bill stowage, etc. appear simply, and desorption is easily carried out to a game machine. For this reason, the maintenance nature of bill handling equipment does not fall.

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DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] It is the perspective diagram showing each part article which constitutes the bill handling equipment of the slot machine by one example of this invention.

[Drawing 2] It is the perspective diagram showing the state where the front face of the building barricade data of the bill handling equipment by this example was equipped with the interior material of a bill proposal.

[Drawing 3] the bill input port which constitutes the bill handling equipment by this example — it is drawing showing the side and the base of a member and the interior material of a bill proposal

[Drawing 4] It is drawing showing the side, flat surface, and base in the state where a bill input port member and the interior material of a bill proposal joined in this example.

[Drawing 5] It is the perspective diagram showing the appearance of the conventional slot machine.

[Drawing 6] It is the perspective diagram showing the internal structure of the

conventional slot machine.

[Description of Notations]

- 11 -- Main part of bill handling equipment
- 12 -- Bill injection regio-oralis material
- 12a -- Opening of the bill injection regio-oralis material 12
- 12c -- Flange section (2nd positioning section)
- 12d -- It becomes depressed (1st positioning section).
- 14 -- Building barricade data (bill discernment machine)
- 14a -- Front face of the building barricade data 14
- 14b -- Bill intake
- 15 -- Interior material of a bill proposal
- 15a -- Lobe
- 15a1 -- Lobe lower part (2nd engagement section)
- 15b -- Bill guidance mouth
- 15e -- Boss (1st engagement section)
- 18 -- Sponge (buffer member)

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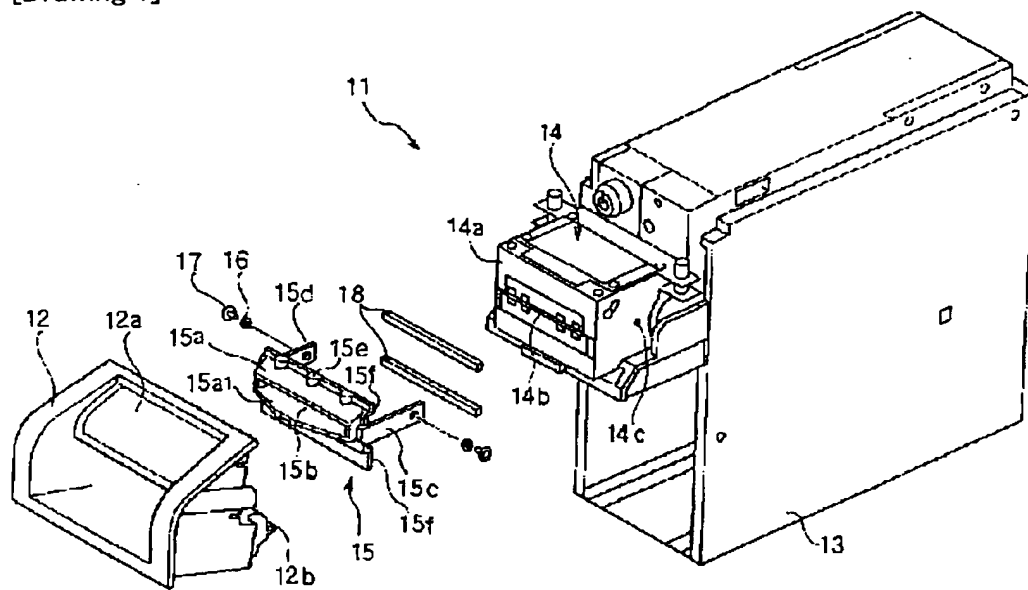
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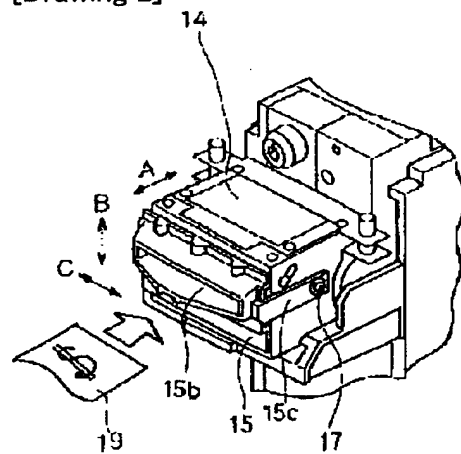
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DRAWINGS

[Drawing 1]

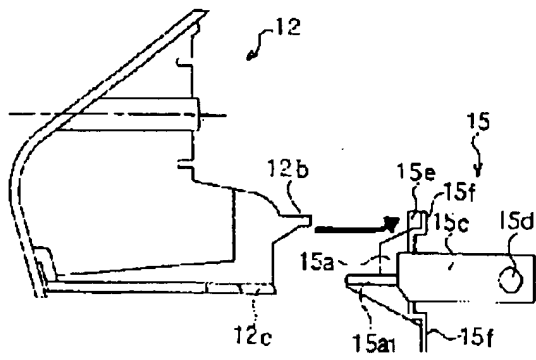


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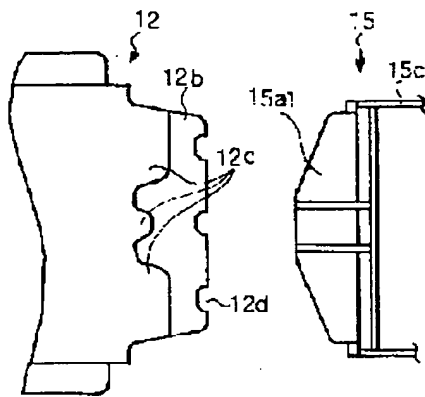


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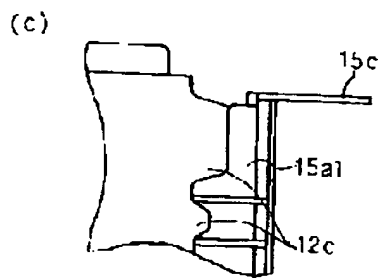
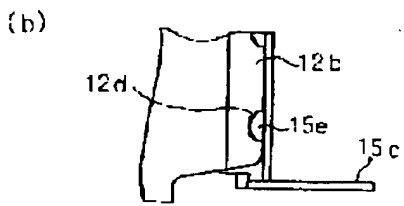
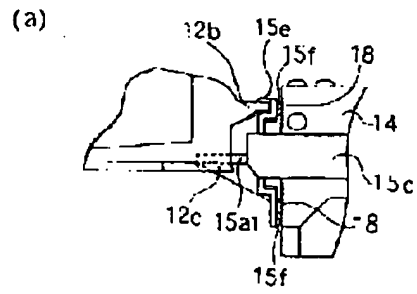
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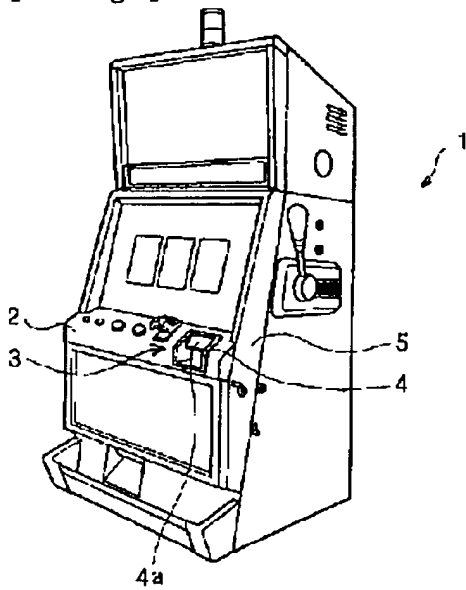
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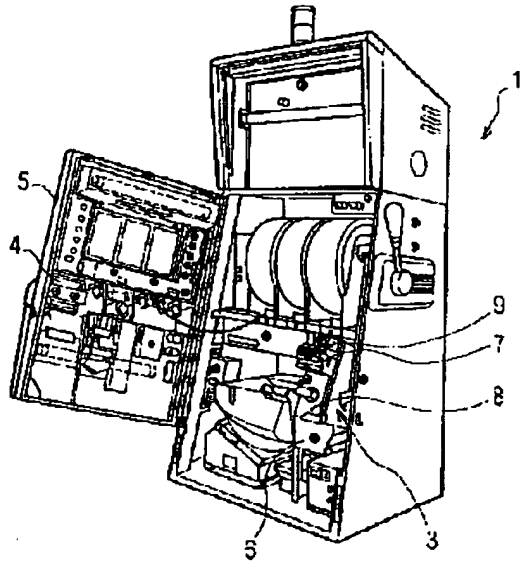
[Drawing 4]



[Drawing 5]



[Drawing 6]



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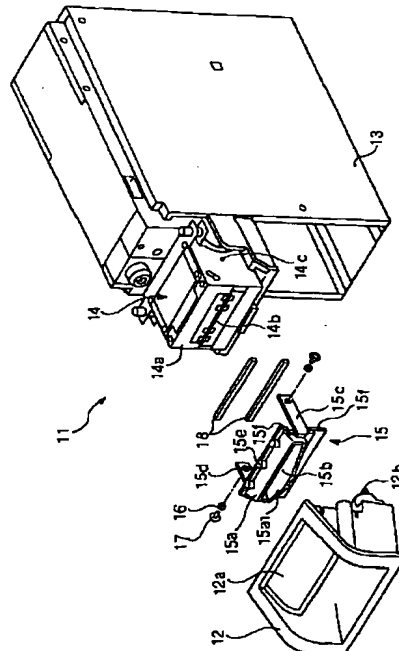
(74) 代理人 弁理士 峯岸 武司

(54) 【発明の名称】 遊技機の紙幣取扱装置

(57) 【要約】

【目的】 調整を要することなく遊技機に簡易にセットされる紙幣取扱装置を提供する。

【構成】 紙幣案内部材15の両側部にはアーム15cが設けられており、これらアーム15cの各端部には遊挿口15dが形成されている。各遊挿口15dにはスぺーサ16が遊挿され、さらに各スぺーサ16にはネジ17が挿入される。また、紙幣案内部材15のヒルバリデータ14側の紙幣案内口15bの上下端面15fにはスポンジ18が貼られる。紙幣案内部材15は、各ネジ17がヒルバリデータ14の側面に設けられたネジ穴14cに螺合することにより、ヒルバリデータ14の前面14aに垂直な方向Aおよび平行な方向B、Cにある程度の遊びを持って取り付けられる。



【特許請求の範囲】

【請求項1】 前面に形成された紙幣取入口から取り込んだ投入紙幣の有効性を識別する紙幣識別機と、投入紙幣を前記紙幣取入口に案内する紙幣案内口が形成された前記紙幣識別機の前面に取り付けられる紙幣案内部材と、前記紙幣案内口を遊技機の表面に露出させて前記紙幣案内部材を覆う遊技機の機体表面に配される紙幣投入口部材とを備えて構成された遊技機の紙幣取扱装置において、

前記紙幣識別機の前面と前記紙幣案内部材との間に弾性を有する緩衝部材を備え、

前記紙幣案内部材は、前記紙幣識別機の前面に垂直な方向および平行な方向に遊びをもって取り付けられていることを特徴とする遊技機の紙幣取扱装置。

【請求項2】 前記紙幣案内部材は、前記紙幣識別機の前面に平行な一方向において起伏する第1の係合部と、この一方向に直交する方向において起伏する第2の係合部とを備え、

前記紙幣投入口部材は、前記第1の係合部に係合して前記紙幣案内部材の遊動位置を前記一方向において規律する第1の位置決め部と、前記第2の係合部に係合して前記紙幣案内部材の遊動位置を前記一方向に直交する方向において規律する第2の位置決め部とを備えたことを特徴とする請求項1記載の遊技機の紙幣取扱装置。

【請求項3】 前記遊技機はスロットマシンであることを特徴とする請求項1または請求項2記載の遊技機の紙幣取扱装置。

【発明の詳細な説明】

【0001】

【産業上の利用分野】本発明は、スロットマシンやパチンコ機等の遊技機に用いられる紙幣取扱装置に関するものである。

【0002】

【従来の技術】従来、この種の紙幣取扱装置としては、例えば、図5の斜視図に外觀を示すスロットマシン1に用いられているものがある。スロットマシン1の正面中央部にはBETボタンやコイン払出ボタン等が設けられたコントロールパネル2が構成されている。紙幣取扱装置3はこのコントロールパネル2の右端部に設けられており、同図にはこの紙幣取扱装置3を構成する紙幣投入口部材4が示されている。紙幣取扱装置3の本体はこのスロットマシン1の内部に収納されており、メインドア5を開くことにより現れる。

【0003】図6はこのメインドア5を開いて観察されるスロットマシン1の内部構造を示す斜視図である。紙幣取扱装置3の本体はビルスタンド6に取り付けられており、紙幣識別機7、スタッカ（紙幣収納部）8および紙幣案内部材9を備えて構成されている。紙幣識別機7は投入紙幣の真偽および良否を判定する。この紙幣識別機7で有効と判定された投入紙幣はスタッカ8に収納さ

れ、回収されるまで一時的に保管される。紙幣案内部材9はこの紙幣識別機7の紙幣取入口に一体となって固定されており、紙幣案内口に投入された紙幣を紙幣識別機7へ案内する。この紙幣案内口は紙幣案内部材9の前面に突出して形成されており、メインドア5が閉じられた状態で紙幣投入口部材4の開口部4aに露出する。

【0004】

【発明が解決しようとする課題】しかしながら、上記従来の構成をした紙幣取扱装置3においては、紙幣投入口部材4はメインドア5の側に取り付けられており、紙幣取扱装置3の本体部品はスロットマシン1の本体側に内蔵されている。従って、紙幣投入口部材4と紙幣案内部材9との相対位置は、メインドア5が閉じられたときに紙幣案内部材9の紙幣案内口が紙幣投入口部材4の開口部4aに嵌入する位置に設定されている必要がある。このため、従来構成の紙幣取扱装置3においては、メインドア5のスロットマシン本体への組み付け寸法、紙幣投入口部材4のメインドア5への組み付け寸法、および紙幣取扱装置本体のスロットマシン本体への組み付け寸法等には高い寸法精度が要求され、さらに、メインドア5、紙幣投入口部材4および紙幣案内部材9といった各部品寸法のバラツキを厳密に抑える必要があった。紙幣取扱装置3のスロットマシン1へのこれら組み付け寸法精度が保てなかったり、各構成部品の寸法誤差が大きくばらついてしまうと、メインドア5を閉じたときに紙幣投入口部材4が紙幣案内部材9に衝突し、各部品が傷着いたり、破損してしまう。このため、このような場合にはメインドア5を持ち上げて紙幣投入口部材4の嵌入位置を紙幣案内部材9に合わせたりする工夫をする必要があり、上記従来構成の紙幣取扱装置3は簡易に遊技機にセットすることが出来なかった。

【0005】一方、このような問題が生じるのを回避するため、紙幣投入口部材4の開口部4aを大きく形成することが考えられる。しかし、開口部4aを大きく形成するとスロットマシン1の機器表面に隙間を生じ、機器にいたずらされる恐れが生じる。また、上記問題を解消するため、紙幣取扱装置3の全構成部品をメインドア5の側に設けてしまうことも考えられる。しかし、紙幣取扱装置3をメインドア5に設置すると、メインドア5の重量が増加してメインドア5の開閉操作がしづらくなる。また、メインドア5に紙幣取扱装置3を取り付けることのできる範囲も限定されてしまい、所望の位置に紙幣取扱装置3を設置することが出来なくなってしまふ。さらに、紙幣取扱装置3をメインドア5に設置すると、単にドアを開いただけでは識別器7やスタッカ8等が現れない。従って、これらをスロットマシン1に対して脱着しにくくなり、その結果紙幣取扱装置3のメンテナンス性は低下する。

【0006】

【課題を解決するための手段】本発明はこのような課題

を解決するためになされたもので、前面に形成された紙幣取入口から取り込んだ投入紙幣の有効性を識別する紙幣識別機と、投入紙幣をこの紙幣取入口に案内する紙幣案内口が形成された、紙幣識別機の前面に取り付けられる紙幣案内部材と、この紙幣案内口を遊技機の表面に露出させて紙幣案内部材を覆う、遊技機の機体表面に配される紙幣投入口部材とを備えて構成された遊技機の紙幣取扱装置において、上記紙幣識別機の前面と上記紙幣案内部材との間に弾性を有する緩衝部材を備え、上記紙幣案内部材を、紙幣識別機の前面に垂直な方向および平行な方向に遊びをもって取り付け付けた。

【0007】また、上記紙幣案内部材に、紙幣識別機の前面に平行な一方において起伏する第1の係合部と、この一方に直交する方向において起伏する第2の係合部とを備え、上記紙幣投入口部材に、第1の係合部に係合して紙幣案内部材の遊動位置を上記一方において規律する第1の位置決め部と、第2の係合部に係合して紙幣案内部材の遊動位置を上記一方に直交する方向において規律する第2の位置決め部とを備えた。

【0008】

【作用】遊技機の機体表面に配される紙幣投入口部材と遊技機に内蔵される紙幣識別機との間に相対的に生じる、紙幣識別機の前面に垂直な方向における寸法誤差は、紙幣案内部材がこの垂直方向において遊動して緩衝部材がこの垂直方向に伸縮することによって吸収される。また、紙幣識別機の前面に平行な方向における寸法誤差は、紙幣案内部材がこの平行方向において遊動することによって吸収される。

【0009】また、機体表面側の紙幣投入口部材を機体本体側の紙幣案内部材に嵌入する際、紙幣投入口部材に設けられた第1および第2の各位置決め部は、紙幣案内部材に設けられた第1および第2の係合部に係合して紙幣案内部材の遊動位置を規律し、紙幣投入口部材と紙幣案内部材との間の相対位置を適正な位置に保持する。

【0010】

【実施例】次に、本発明による遊技機の紙幣取扱装置をスロットマシンの紙幣取扱装置に適用した一実施例について説明する。

【0011】図1は本実施例による紙幣取扱装置の各構成部品を示す斜視図である。紙幣取扱装置は、スロットマシン本体に内蔵固定される紙幣取扱装置本体11と、メインドアに取り付け固定される紙幣投入口部材12とで構成されている。

【0012】紙幣取扱装置本体11は、スタッカ収納ケース13の上部に構成された紙幣識別機（ビルバリデータ）14と、このビルバリデータ14の前面14aに装着される紙幣案内部材15とを備えている。ビルバリデータ14は前面14aに紙幣取入口14bが形成されており、この紙幣取入口14bから取り込んだ投入紙幣の有効性を識別する。投入紙幣はその真偽の如何にかかわ

らずこのビルバリデータ14を一旦通過し、有効な紙幣はそのまま取り込まれ、有効でない紙幣は戻される。紙幣案内部材15の前部突出部15aには、紙幣取入口14bに対向させられる紙幣案内口15bが形成されている。突出部15aは、メインドアが閉じられたときに紙幣投入口部材12の開口部12aに嵌入して機器外部に現れ、紙幣案内口15bはスロットマシンの機器表面に露出する。投入紙幣はこの紙幣案内口15bによってその幅方向の偏位が抑えられ、ビルバリデータ14の紙幣取入口14bに案内される。

【0013】また、紙幣案内部材15の両側部にはアーム15cが設けられており、これらアーム15cの各端部には遊挿口15dが形成されている。この遊挿口15dは、図3(a)の側面図に示すように、真円が垂直および水平方向に少し伸びた形状で開口している。各遊挿口15dにはスペーサ16が遊挿され、さらに各スペーサ16にはネジ17が挿入される。また、紙幣案内部材15のビルバリデータ14側の紙幣案内口15bには、この紙幣案内口15bの横長開口部の上下端面15fに沿って各スポンジ18が貼られる。各スポンジ18は弾性を有する緩衝部材を構成し、ダンバ機能を発揮する。紙幣案内部材15は、各ネジ17がビルバリデータ14の側面に設けられたネジ穴14cに螺合することにより、ビルバリデータ14の前面14aに取り付けられる。この際、紙幣案内部材15とビルバリデータ14の前面14aとの間に各スポンジ18が介挿される。また、各アーム15c間の間隔はビルバリデータ14の幅よりもある程度広く遊びを持って設定されており、各アーム15cはスペーサ16の外周面をこの幅方向においてある程度摺動する。

【0014】図2はビルバリデータ14に紙幣案内部材15が取り付けられた状態を示す斜視図である。紙幣案内部材15は上述のように遊挿口15dにスペーサ16が遊挿されてビルバリデータ14に取り付けられている。このため、紙幣案内部材15は、ビルバリデータ14の前面14aに垂直な図示の前後方向A、および平行な図示の上下方向B並びに左右方向Cにある程度遊動する。投入紙幣19は図示の方向から紙幣取入口15bに挿入されるが、紙幣案内部材15の上記遊動は、紙幣案内口15bから紙幣取入口14bまでの間に形成される紙幣搬送経路が常に確保される程度の遊びに設定されている。

【0015】図3(a)は上記の紙幣案内部材15と紙幣投入口部材12の各側面を示し、同図(b)はこれら各部品の底面を示している。

【0016】紙幣投入口部材12の紙幣案内部材15側には、つば部12bおよびつば部12cが形成されている。これらつば部12bおよび12cは一定の間隔を置いて離れて形成されており、これらつば部12bおよび12c間には、紙幣案内部材15の突出部15aが嵌入

する空間が形成されている。このつば部12bには同図(b)に示す3つの窪み12dが形成されており、各窪み12dは紙幣投入口部材12の第1の位置決め部を構成している。また、紙幣投入口部材12の下方において紙幣案内部材15側へ突出する端部が形成されたつば部12cは、紙幣投入口部材12の第2の位置決め部を構成している。

【0017】また、紙幣案内部材15の突出部15aの上側根元部には紙幣投入口部材12の各窪み12dと嵌合する3つのボス15eが形成されている(図1参照)。これらボス15eは紙幣案内部材15の第1の係合部を構成しており、紙幣案内部材15がビルバリデータ14に装着されたとき、各ボス15eは、ビルバリデータ14の前面14aに平行な左右方向Cにおいて起伏する。また、紙幣案内部材15の突出部15aの下部15a1は紙幣投入口部材12側に突出しており、紙幣案内部材15の第2の係合部を構成している。この突出部15aの下部15a1は、ビルバリデータ14の前面14aに平行な左右方向Cに直交する上下方向Bにおいて起伏する。

【0018】スロットマシンのメインドアが閉じられることにより、メインドアに取り付けられた紙幣投入口部材12は、同図(a)の矢示方向からスロットマシン本体に内蔵された紙幣案内部材15に接近する。そして、紙幣投入口部材12はまずそのつば部12bが紙幣案内部材15の前部突出部15aの上側傾斜面に接触する。メインドアがさらに閉じられることにより、つば部12bはこの傾斜面を滑り、各窪み12dは紙幣案内部材15の各ボス15eに嵌合する。これと同時につば部12cは突出部下部15a1の下方に滑り込む。この結果、紙幣投入口部材12と紙幣案内部材15とは図4(a)の側面図に示すように密着した状態で接合し、紙幣案内部材15は紙幣案内口15bをメインドアの表面に露出させて紙幣投入口部材12によって覆われる。

【0019】同図(b)はこの接合状態を上方から見た平面図であり、同図(c)はこの接合状態を下方から見た底面図である。紙幣投入口部材12の窪み12dが同図(b)のように紙幣案内部材15のボス15eに係合することにより、遊動する紙幣案内部材15の取り付け位置は、ビルバリデータ14の前面に平行な左右方向Cにおいて規律される。また、紙幣投入口部材12のつば部12cが同図(c)のように紙幣案内部材15の突出部下部15a1に係合することにより、遊動する紙幣案内部材15の取り付け位置は、ビルバリデータ14の前面に平行な上下方向Bにおいて規律される。すなわち、紙幣投入口部材12の開口部12aを紙幣案内部材15の突出部15aに嵌入する際、紙幣投入口部材12に設けられた窪み12dおよびつば部12cは、紙幣案内部材15に設けられたボス15eおよび突出部下部15a1に係合して紙幣案内部材15の遊動位置を規律し、紙幣投

入口部材12と紙幣案内部材15との間の相対位置を適正な位置に保持する。

【0020】このような本実施例による紙幣取扱装置によれば、スロットマシンのメインドア表面に取り付けられる紙幣投入口部材12とスロットマシン本体に内蔵されるビルバリデータ14との間に相対的に生じる、組み付け寸法精度および部品寸法精度に起因する寸法誤差は、紙幣案内部材15が遊動することによって吸収される。つまり、ビルバリデータ前面14aに垂直な方向Aに生じるこの寸法誤差は、紙幣案内部材15がこの垂直方向Aにおいて遊動してスポンジ18がこの垂直方向Aに伸縮することによって吸収される。また、ビルバリデータ前面14aに平行な方向BおよびCに生じる上記寸法誤差は、紙幣案内部材15がこの平行方向BおよびCにおいて前述のように遊動することによって吸収される。

【0021】なお、上記実施例においては緩衝部材としてスポンジ18を用いた場合について説明したが、緩衝部材はこれに限定されるものではなく、例えば、スプリングやゴムといった弾性を有するダンバ機能を発揮する部材であれば良い。このような緩衝部材を用いた場合においても上記実施例と同様な効果が奏される。また、上記実施例においては本発明をスロットマシンに適用した場合について説明したが、本発明はこれに限定されるものではなく、例えばパチンコ機といった他の遊技機に本発明を適用することも可能である。

【0022】

【発明の効果】以上説明したように本発明によれば、遊技機の機体表面に配される紙幣投入口部材と遊技機に内蔵される紙幣識別機との間に相対的に生じる、紙幣識別機の前面に垂直な方向における寸法誤差は、紙幣案内部材がこの垂直方向において遊動して緩衝部材がこの垂直方向に伸縮することによって吸収される。また、紙幣識別機の前面に平行な方向における寸法誤差は、紙幣案内部材がこの平行方向において遊動することによって吸収される。

【0023】このため、各部品の機器への取り付けは従来のように高い寸法精度で行う必要はなく、また、各部品寸法のバラツキを従来のように厳しく抑える必要はない。従って、紙幣取扱装置は調整を要することなく遊技機に簡易にセットされ、寸法誤差によって従来のように各部品を傷着けたり破損させることはない。また、紙幣投入口部材に大きな開口部を形成する必要もないため、機器表面にいたずらされるような隙間を生じることもない。また、紙幣投入口部材が機器表面側に取り付けられ、紙幣取扱装置本体が機器本体内部に収納されるため、扉の重量が増加したりすることはなく、扉は容易に開閉される。しかも、紙幣取扱装置の遊技機への取り付け位置に従来のように制約を生じることもない。さらに紙幣識別機や紙幣収納部等は扉を単に開くことによって

簡易に現れ、遊技機に対して容易に脱着される。このため、紙幣取扱装置のメンテナンス性が低下することもない。

【図面の簡単な説明】

【図1】本発明の一実施例によるスロットマシンの紙幣取扱装置を構成する各部品を示す斜視図である。

【図2】本実施例による紙幣取扱装置のビルバリデータの前面に紙幣案内材が装着された状態を示す斜視図である。

【図3】本実施例による紙幣取扱装置を構成する紙幣投入口部材および紙幣案内材の側面および底面を示す図である。

【図4】本実施例において紙幣投入口部材と紙幣案内材とが接合した状態の側面、平面および底面を示す図である。

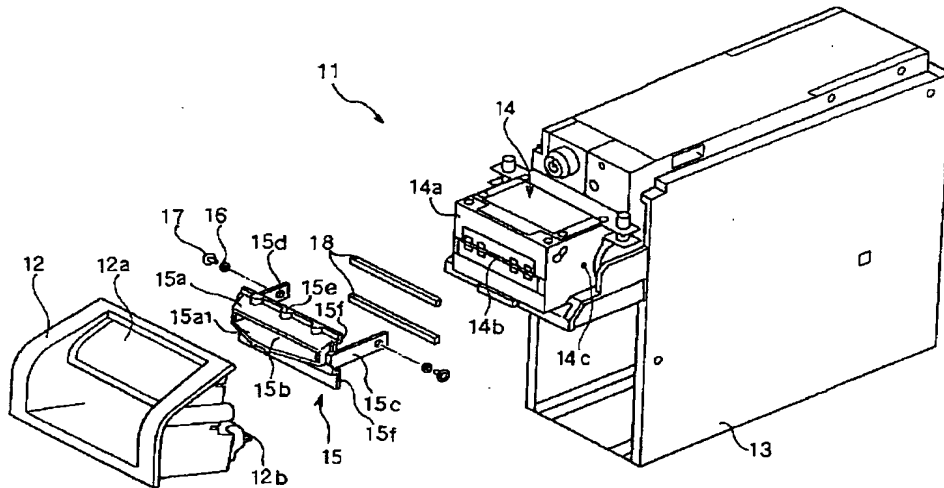
【図5】従来のスロットマシンの外観を示す斜視図である。

*【図6】従来のスロットマシンの内部構造を示す斜視図である。

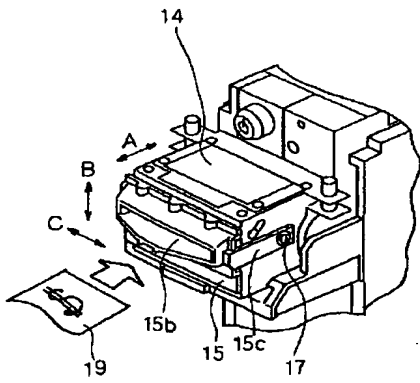
【符号の説明】

- 11…紙幣取扱装置本体
- 12…紙幣投入口部材
- 12a…紙幣投入口部材12の開口部
- 12c…つば部（第2の位置決め部）
- 12d…窪み（第1の位置決め部）
- 14…ビルバリデータ（紙幣識別機）
- 14a…ビルバリデータ14の前面
- 14b…紙幣取入口
- 15…紙幣案内材
- 15a…突出部
- 15a1…突出部下部（第2の係合部）
- 15b…紙幣案内口
- 15e…ボス（第1の係合部）
- 18…スポンジ（緩衝部材）

【図1】

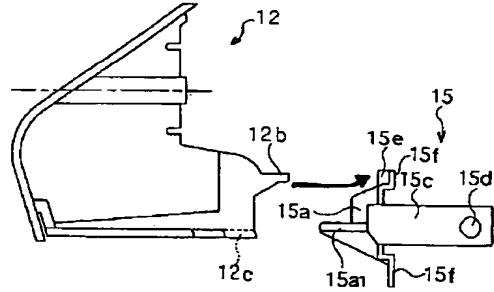


【図2】

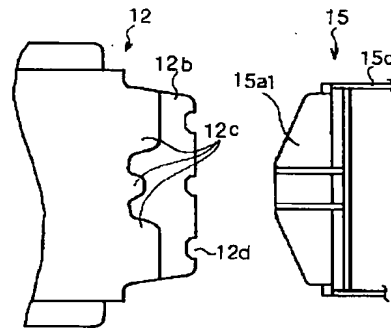


【図3】

(a)

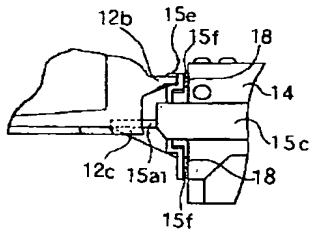


(b)

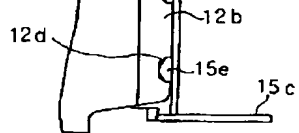


【図4】

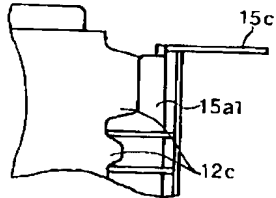
(a)



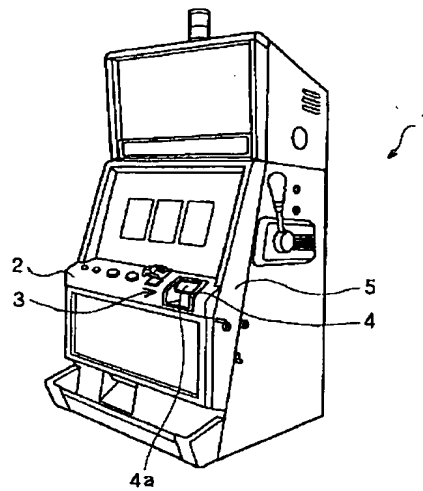
(b)



(c)



【図5】



(7)

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【図6】

